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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/771,240	01/26/2001	Amit Kumar Sarkhel	EN995038US5	6976

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EUGENE LIEBERSTEIN
ANDERSON, KILL & OLICK, PC
1251 AVENUE OF THE AMERICAS
NEW YORK, NY 10020-1182

EXAMINER

IP, SIKYIN

ART UNIT	PAPER NUMBER
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1742

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DATE MAILED: 03/27/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

Specification

1. The Abstract of the Disclosure is objected to because the abstract is too short and does not represent the invention in details. Correction is required. See 37 CFR § 1.72 and M.P.E.P. § 608.01(b). A substitute abstract should be filed in response to this action. A comprehensive abstract describing the invention has become very significant, as the abstract is often searched and retrieved through commercial data-searching by the scientific and research community in industry, academic institutions and the patent office.

Applicant is reminded of the proper language and format of an Abstract of the Disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 250 words. It is important that the abstract not exceed 250 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said", should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," *etc.*

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject

matter which the applicant regards as his invention.

3. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 9 is indefinite because the ".5 wt%" in line 3 is an apparent typographical error.

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321© may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 8-10, 13, and 14 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 12-17 of U.S.

Patent No. 5730932 to Sarkhel et al. Although the conflicting claims are not

identical, they are not patentably distinct from each other because the claimed steps and solder composition overlap the steps and solder composition of cited patent.

Claim Rejections - 35 USC § 103

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 8-9 and 13-14 are rejected under 35 U.S.C. § 103 as being unpatentable over USP 5439639 to Vianco in view of USP Re. 33197 to Deambrosio, USP Re. 32982 to O'Rourke, or USP 5361969 to Gileta.

10. The Vianco reference(s) disclose(s) the features including the claimed Sn-Ag-Bi solder composition (col. 5, lines 23-45) and wave soldering method (col. 1, lines 15-

47). The difference between the reference(s) and the claims are as follows: Vianco does not disclose the wave soldering setup. However, Deambrosio (abstract), O'Rourke (col. 1, lines 23-65), or Gileta (col. 1, lines 51-68) disclose(s) wave soldering setup in the same field of endeavor or the analogous metallurgical art. Therefore, as is evident by cited references that the claimed solder composition and wave soldering methods are known in the art of cited references.

11. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over references as applied to claims above, and further in view of Kattner et al.

12. The claimed subject matter as is disclosed and rejected above by the cited reference(s) except for higher Bi content. Vianco in col. 2, lines 38-51 discloses higher Bi content is known in the plumbing art for a large pasty range. Kattner in page 603, left col. discloses Sn-Bi-Ag solder system is known in the art for electronic applications. In page 608, Figure 7 Kattner discloses liquidus surface and solidus surface of Sn-Bi-Ag system in the same field of endeavor or the analogous metallurgical art. Therefore, it would have been obvious to one having ordinary skill in the art of the cited references at the time the invention was made to adjust the result effective variable such as Bi content for a desirable melting temperature range. It has been well settled that selecting a range in a known range by optimization for the best results is within ambit of ordinary skill artisan, see *In re Aller*, et al., 105

USPQ 233 and *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980).

Conclusion

The above rejection relies on the reference(s) for all the teachings expressed in the text(s) of the references and/or one of ordinary skill in the metallurgical art would have reasonably understood or implied from the text(s) of the reference(s). To emphasize certain aspect(s) of the prior art, only specific portion(s) of the text(s) have been pointed out. Each reference as a whole should be reviewed in responding to the rejection, since other sections of the same reference and/or various combination of the cited references may be relied on in future rejection(s) in view of amendment(s).

All recited limitations in the instant claims have been met by the rejections as set forth above.

Applicant is reminded that when amendment and/or revision is required, applicant should therefore specifically point out the support for any amendments made to the disclosure. See MPEP § 2163.06 (a) and 37 C.F.R. § 1.119.

Examiner Correspondence


Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Ip whose telephone number is (703) 308-2542. The examiner can normally be reached on Monday to Friday from 5:30 A.M. to 2:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Roy V. King, can be reached on (703)-308-1146.

The facsimile phone numbers are (703) 872-9310 (non-final Official Paper only), (703) 872-9311 (after-final Official Paper only), and (703) 305-7719 (Unofficial Paper only). When filing a FAX in Technology Center 1700, please indicate in the Header (upper right) "Official" for papers that are to be entered into the file, and "Unofficial" for draft documents and other communication with the PTO that are not for entry into the file of the application. This will expedite processing of your papers.

Serial No: 09/771,240
Art Unit: 1742

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SIKYIN IP
PRIMARY EXAMINER
ART UNIT 1742

S. Ip
March 23, 2002